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Canada. Mines, Bureau of. Explosives Division

BEWARE

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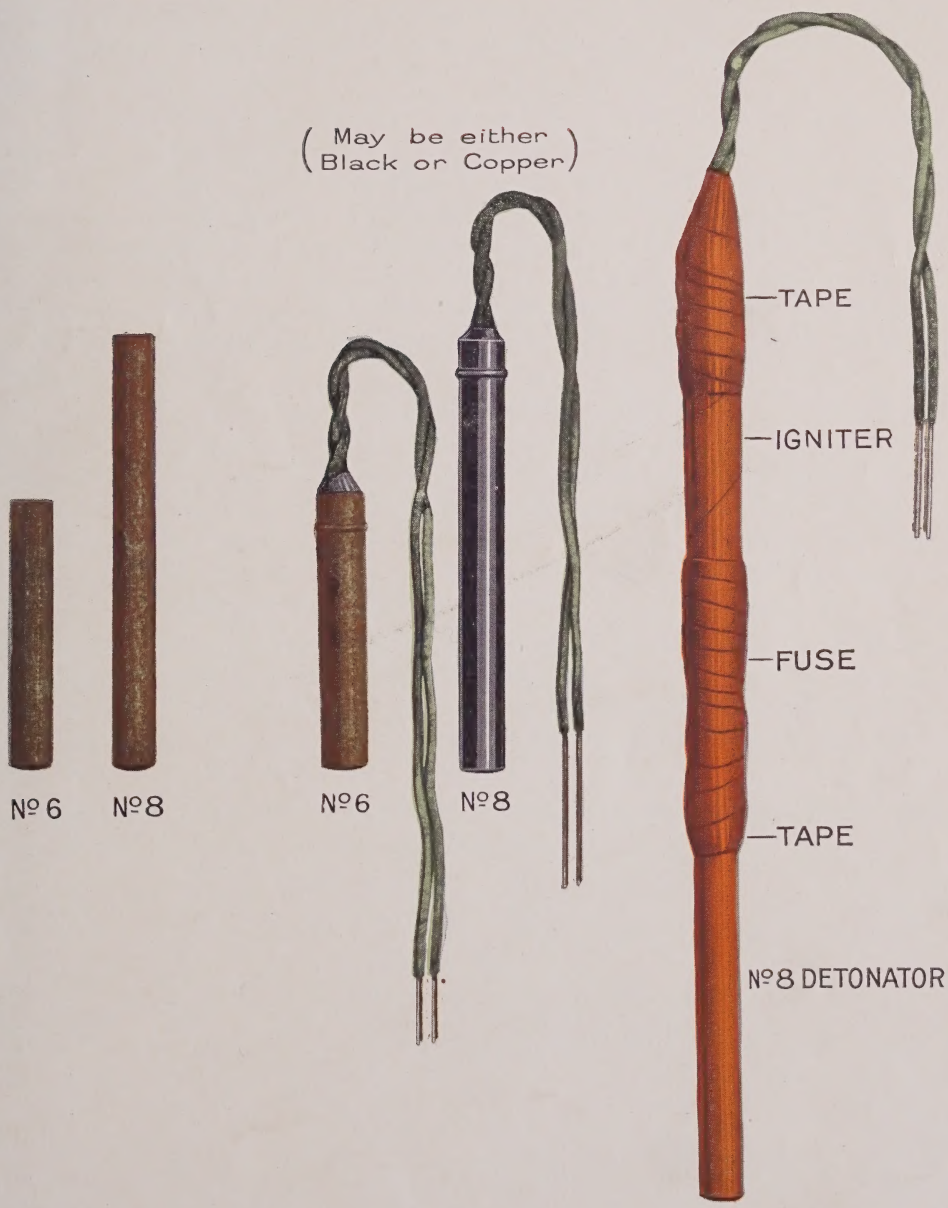
ORDINARY "DETONATORS"

ELECTRIC "DETONATORS"

DELAY ACTION "ELECTRIC DETONATOR"



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DETONATORS AND ELECTRIC DETONATORS

A detonator, often called a "**blasting cap**", is a small tube, which contains a small quantity of a highly explosive mixture.

The detonators in general use are of copper. They vary somewhat in size, the most common being about $1\frac{1}{2}$ inches in length and $\frac{1}{4}$ inch in diameter and 2 inches in length and $\frac{1}{4}$ inch in diameter. They are closed at one end and open at the other. The explosive in them only partly fills the tubes so that at first sight one might think they were empty. It is, however, very unlikely that a really empty detonator will be found, except in the factories in which they are made and filled.

The explosive is of a pale grey colour. It is a very sensitive and violent explosive, capable of doing far more damage than one would expect with so small a quantity. The detonator is used to set off other explosives, as dynamite. To accomplish this the blaster inserts the end of a length of safety fuse in the detonator, and carefully inserts the detonator in one of the dynamite cartridges which form the blasting charge. He then lights the safety fuse and goes to a safe distance. When the fuse burns down to the detonator the flash from the end ignites the composition in the detonator and this detonates the whole charge.

An electric detonator or **electric blasting cap** consists of a detonator, usually painted black or brown, but it has not an open end like the simple detonator. The part of the tube above the detonating composition is used to accommodate the priming (which is ignited electrically), and the ends of the wires for carrying the current of electricity. The end of the tube is carefully sealed up and the electric detonator, as issued for use, consists of this sealed up tube with a length of insulated wire attached.

It is used for detonating a charge by being inserted in a cartridge just as an ordinary detonator is, but instead of being fired by a safety fuse, it is fired electrically by the blaster. He attaches the wires of the electric detonator to a long length of wires, and then passes an electric current through the electric detonator from a distance.

Although an electric detonator is adapted for electric firing, it can be fired accidentally by a blow just as an ordinary detonator may be.

DANGERS

Persons using detonators of any kind are required to keep them locked up. Sometimes, however, they get mislaid and are forgotten. When this happens they may be found later on, perhaps a year after all work has finished, by someone who does not know what they are. Frequently when boys have found them they have commenced to examine them, and played with them, and have accidentally exploded them. Sometimes they have tried to pick out the composition and in that way immediately caused an explosion, or they have hit them with stones, either in the hand or by throwing stones at the detonators. Some boys have merely put them in their pocket, and later on have fallen or knocked against something and exploded them. In nearly all cases the explosion of a detonator has had very serious results. Sometimes a boy loses the sight of an eye as well as getting badly injured about the face. The loss of a hand, or the fingers of a hand or hands, is frequently the result of playing with explosives.

WARNING

When any boy or girl finds a detonator or electric detonator, they should not touch it but should tell their school teachers, or their parents where they saw the detonators, so that they may report it to the proper people, who will attend to their removal or destruction.

EXPLOSIVES DIVISION
DEPT. OF MINES
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